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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/528,024

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EXAMINER

NORMAN, MARC E

ART UNIT

PAPER NUMBER

3744

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/528,024	Applicant(s) GUYOMARC'H, RAYMOND	
	Examiner Azim Rahim	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/20/2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations, "said system comprising a network of tubes independent of said thermal system to be cooled," in claim 1, and "the adjustable flow cocks pass through the tubes," in claim 2, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

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the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because there is inadequate labeling of drawing figures in figs. 2-4.

Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings.

The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Regarding claim 1, in the limitation, "said system comprising a network of tubes independent of said thermal system to be cooled, said tubes containing cooling water circulating under pressure and being equipped with nozzles provided for atomizing the water and spraying it," the disclosure doesn't show how the network of tubes are disposed within the thermal system. Also, the disclosure doesn't show how the tubes are integrated with the cocks, or disposed independently of the cocks. The same rationale applies to claim 2 wherein the limitation, "the adjustable flow cocks pass through the tubes."

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 1, the recitation, "it further comprises" renders this claim indefinite because it is unclear what the word *it* refers to. For examination purposes, the said limitation will be read as *--the thermal system further comprises--*. Regarding claim 2, in the limitation, "the adjustable flow cocks pass through the tubes, said cocks terminating at said nozzles," it is unclear as to how the tubes are connected to the cocks. For examination purposes, the said limitation will be read as *-- the adjustable flow cocks are connected to the tubes, said cocks terminating at said nozzles--*.

Claim Objections

6. Claims 4-13 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim *cannot depend from any other multiple dependent claim*. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

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Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. ^{RRB} Claims 1-3 rejected under 35 U.S.C. 102(b) as being anticipated by Arthur et al. (US 5,115,184).

- Regarding claim 1 and 13, Arthur et al. discloses a system for cooling an inner wall (top of wall 11) of a thermal system comprising a double wall (top wall 11 and bottom wall 39), said inner wall being subjected to temperatures greater than or equal to its physical capacity (col. 1 lines 18-24), said system comprising a network of tubes (tube 71) independent of said thermal system to be cooled (tubes 71 are above furnace roof 10 interconnected with spray nozzles 33; fig. 1), said tubes (71) containing cooling water (col. 3 lines 9-14) circulating under pressure (col. 4 lines 26-29) and being equipped with nozzles (spray heads 34) provided for atomizing the water (capable of atomizing the water) and spraying it in full cones (explicitly shown in fig. 1, wherein spray heads 34 spray in a cone shape) against said inner wall (explicitly shown in fig. 1) and controlled by adjustable-flow cocks (spray nozzles 33, wherein the diameter of the spray nozzles can be adjusted), characterized in that said network of tubes is an integral part of the outer wall of the thermal system to be cooled (explicitly shown

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in fig. 1) and in that it further comprises means for maintaining the water spraying zone delimited by said respective inner and outer walls under negative pressure (col. 7 lines 11-13 via vacuum; and inherent that cooling the bottom wall would yield a negative pressure based on the decreasing temperature of the delimited area). This system inherently performs the method of cooling an inner wall of a thermal system.

- Regarding claim 2, Arthur et al. discloses the adjustable-flow cocks (spray nozzles 33) *are connected to* the tubes (explicitly shown in fig. 1), said cocks terminating in said nozzles (explicitly shown in fig. 1).
- Regarding claim 3, Arthur et al. discloses tubes are installed on the inside surface of the outer wall (part of tubing (water supply manifold) extends inside top wall 11; fig. 1).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jackaman et al. (US 5,797,274) discloses the cooling of hot bodies. Lehr et al. (US 5,561,685) modular spray cooled side-wall for electric arc furnaces.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Azim Rahim whose telephone number is 571-270-1998. The examiner can normally be reached on Mon - Thur 8am - 4:30pm Est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules can be reached at 571-272-6681 or Cheryl Tyler at 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AR 7/30/2007

FRANTZ JULES
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to be 'Frantz Jules', written over a horizontal line.